PATIENT ENGAGEMENT

THE INTERSECTION OF MOTIVATIONS, ACTIVITIES AND PHYSIOLOGY

MSD

WHY DOES IT MATTER?

How does patient engagement matter to the understanding of disease?

Where is your organization most challenged?

Rank the following:

- ADHERENCE (e.g. to medication, therapy, device compliance)
- ADOPTION (e.g. adoption of new digital therapies)
- DATA (e.g. outcomes justification, quality)
- PATIENT CONTEXT (e.g. knowledge, attitudes & beliefs)
- PHYSICIAN CONTEXT (e.g. workflow, staffing)

WHAT DO PATIENTS WANT FROM APPLICATIONS?

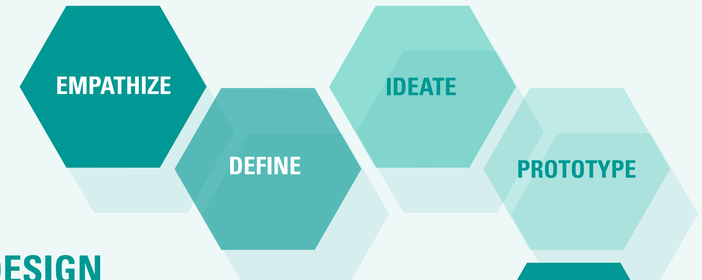
- Ease of use
- Social Networking
- Medical Trustworthiness
- Control

Ref: Nead, C.; Wyke, A. (editors). "What do people want from their health apps? A survey of 250 patient and consumer groups." Whitepaper. 2013. PatientView.

RELEVANCE TO INDUSTRY

Remote Assessment of Disease and Relapse – Central Nervous System (RADAR – CNS): an Innovative Medicines Initiative (IMI) Launched April 2016 e-health for brain disorders

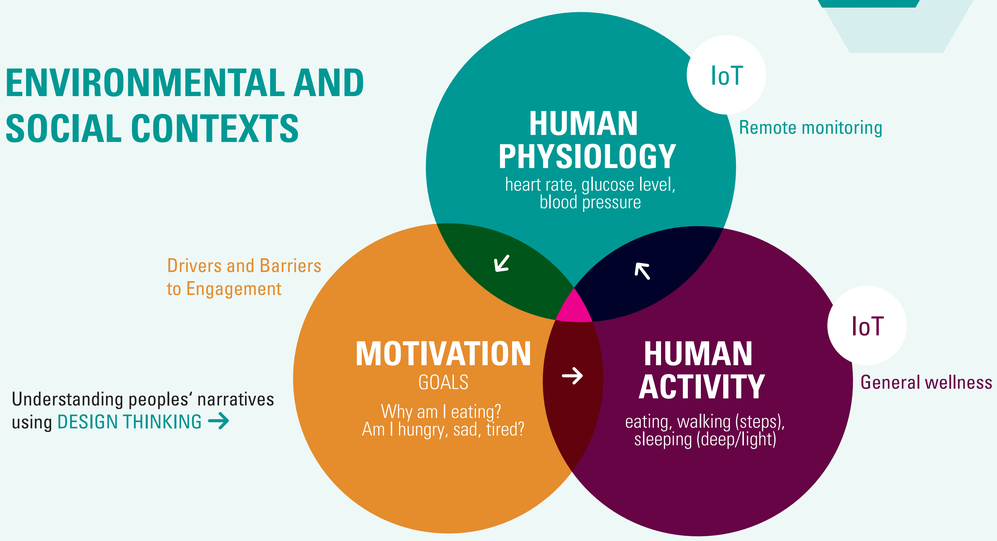
RADAR-CNS



WHERE DOES DESIGN THINKING APPLY?

Design thinking – objectives and process

ENVIRONMENTAL AND SOCIAL CONTEXTS

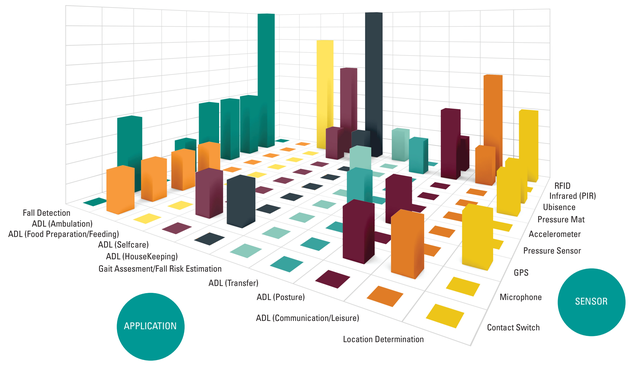


MOTIVATIONS AND GOALS

- Motivation matters to how patients and doctors interact.
- Motivation matters to how patients engage in their lives and everyday activities.
- It matters to the state of psychology.
- It impacts our performance in every facet of our lives.

DATA COLLECTION GAPS

Distribution of research studies based on fixed sensor



Ref: Khusainov, R.; Azzi, D; Achumba, I.; Bersch, S. Real-Time Human Ambulation, Activity, and Physiological Monitoring: Taxonomy of Issues, Techniques, Applications, Challenges and Limitations. Sensors. 2013, 13, 23852-12902.

MAP HUMAN ACTIVITIES TO DISEASES

	Human Activities	
Therapy Areas	**Eating****	**Sleeping****
Important parameters (measuring behavior, speech, cognition, physiology)	Calories Protein, Sugars, Carbohydrates, Dietary Fiber Nutritional values Frequency Time of day	Sleep architecture Total sleep Sleep position Time of day
Factors affecting	Microbiome Enzymes BMI Exercise/Activities Stress Travel/Location	BMI, Food intake, Immune function, Environmental exposures, Exercise, Stress/Work activities, Social interactions, Travel/Location, Seasons, Age, Gender

WHERE DO WE GO FROM HERE?

- Establishing studios and capabilities
- Using this as a lens to develop applications
- Mapping of human activities and therapy
- Data science components